

SEQUENCE LISTING

<110> Klein, Robert D.
Brennan, Thomas J.

<120> METHODS OF CREATING CONSTRUCTS USEFUL FOR INTRODUCING
SEQUENCES INTO EMBRYONIC STEM CELLS

<130> 376472000200

<140> Unassigned

<141> 1998-11-17

<150> 60/084,949

<151> 1998-05-11

<160> 44

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 4768

<212> DNA

<213> Plasmid vector

<400> 1

gttaactacg	tcaggtggca	cttttcgggg	aaatgtgcgc	ggaaccccta	tttgtttatt	60
tttctaaata	cattcaaata	tgtatccgct	catgagacaa	taaccctgat	aaatgcttca	120
ataatatgga	aaaagggaaga	gtatgagtat	tcaacatttc	cgtgtcgccc	ttattccctt	180
ttttgcggca	ttttgccttc	ctgtttttgc	tcacccagaa	acgctgggtga	aagtaaaaga	240
tgctgaagat	cagttgggtg	cacgagtggt	ttacatcgaa	ctggatctca	acagcggtaa	300
gatccttgag	agttttcgcc	ccgaagaacg	ttctccaatg	atgagcactt	ttaaagttct	360
gctatgtggc	gcggtattat	ccggtgttga	cgccggggcaa	gagcaactcg	gtcgccgcat	420
acactattct	cagaatgact	tggttgagta	ctcaccagtc	acagaaaagc	atcttacgga	480
tgccatgaca	gtaagagaat	tatgcagtg	tgccataacc	atgagtata	acaactgcggc	540
caacttactt	ctgacaacga	tcggaggacc	gaaggagcta	accgcttttt	tgacacaacat	600
gggggatcat	gtaactcgcc	ttgatcggtg	ggaaccggag	ctgaatgaag	ccataccaaa	660
cgacgagcgt	gacaccacga	tgcctgtagc	aatggcaaca	acgttgcgca	aactattaac	720
tgccgaacta	cttactctag	cttcccgcca	acaattaata	gactggatgg	aggcggataa	780
agttgcagga	ccacttctgc	gctcgccctt	tcgggctggc	tggtttattg	ctgataaatc	840
tgagccgggt	gagcgtgggt	ctcgcggtat	cattgcagca	ctggggccag	atggtaagcc	900
ctcccgatc	gtagttatct	acacgacggg	gagtcaggca	actatggatg	aacgaaatag	960
acagatcgct	gagataggtg	cctcactgat	taagcattgg	taactgtcag	accaagttta	1020
ctcatatata	cttttagattg	atttaccccg	gttgataatc	agaaaagccc	caaaaacagg	1080
aagattgtat	aagcaaatat	ttaaattgta	aacgttaata	ttttgttaaa	attcgcgtaa	1140
aatttttggt	aaatcagctc	attttttaac	caataggccg	aaatcggcaa	aatcccttat	1200
aaatcaaaag	aatagcccga	gatagggttg	agtgttggtc	cagtttgtaa	caagagtcca	1260
ctattaaaga	acgtggactc	caacgtcaaa	gggcgaaaaa	ccgtctatca	gggcgatggc	1320
ccactacgtg	aaccatcacc	caaatcaagt	tttttgggtg	cgaggtgccg	taaagcacta	1380
aatcggaacc	ctaaagggag	cccccgatgt	agagcttgac	gggaaaagcg	aacgtggcga	1440
gaaagggaag	gaagaaagcg	aaaggagcgg	gcgctagggc	gctggcaagt	gtagcgggtca	1500
cgctgcgcgt	aaccaccaca	ccgcgcgcgc	ttaatgcgcc	gctacagggc	gcgtaaaagg	1560
atctaggtga	agatcctttt	tgataatctc	atgacaaaaa	tcccttaacg	tgagttttcg	1620
ttccactgag	cgtcagaccc	cgtagaaaaa	atcaagggat	cttcttgaga	tccttttttt	1680
ctgcgcgtaa	tctgtctgtt	gcaaacaaaa	aaaccaccgc	taccagcggt	ggtttggttg	1740
ccgatcaag	agctaccaac	tctttttccg	aaggtaactg	gcttcagcag	agcgagata	1800
ccaaatactg	ttcttctagt	gtagccgtag	ttaggccacc	acttcaagaa	ctctgtagca	1860

```

ccgcctacat acctcgctct gctaatacctg ttaccagtgg ctgctgccag tggcgataag 1920
tcgtgtctta ccgggttgga ctcaagacga tagttaccgg ataaggcgca gcggtcgggc 1980
tgaacggggg gttcgtgcac acagcccagc ttggagcgaa cgacctacac cgaactgaga 2040
tacctacagc gtgagctatg agaaagcgcc acgcttcccg aagggagaaa ggcggacagg 2100
tatccggtaa gcggcagggt cggaacagga gagcgacga gggagcttcc agggggaaac 2160
gcctggatc tttatagtc tgtcgggtt cgcacactct gacttgagcg tcgatttttg 2220
tgatgctcgt cagggggggc gagcctatgg aaaaacgcca gcaacgcggc ctttttacgg 2280
ttcctggcct tttgctggcc ttttgcac atgtaatgtg agttagctca ctcataggc 2340
accccaggct ttacacttta tgcttccggc tcgtatgttg tgtggaattg tgagcggata 2400
acaatttcac acaggaaaca gctatgacca tgattacgcc aagctacgta atacgactca 2460
ctaggcggcc gcgtttaaac aatgtgctcc tctttggctt gcttccgcgg gccaaagccag 2520
acaagaacca gttgacgtca agcttcccgg gacgcgtgct agcggcgcg cgaattcctg 2580
caggattcga gggcccctgc aggtcaattc tacgggtag gggagggcgt tttcccaagg 2640
cagtctggag catgcgcttt agcagccccg ctggcacttg gcgctacaca agtggcctct 2700
ggcctcgcac acattccaca tccaccggtg gcgccaaccg gctccgttct ttggtggccc 2760
cttcgcgcca cttctactc ctcccctagt caggaaagtc cccccgcgc cgagctcgc 2820
gtcgtgcagg acgtgacaaa tggaaagtag acgtctcact agtctcgtgc agatggacag 2880
caccgctgag caatggaagc gggtaggcct ttggggcagc ggccaatagc agctttgctc 2940
cttcgctttc tgggctcaga ggctgggaa ggggtgggtcc gggggcgggc tcagggcgcg 3000
gctcaggggc ggggcgggcg cgaaggtcct cccgaggccc ggcatctctg cacgcttcaa 3060
aagcgcacgt ctgcgcgct gttctcctct tctcatctc cgggcctttc gacctgcagc 3120
caatatggga tcggccattg aacaagatgg attgcacga ggttctccgg ccgcttgggt 3180
ggagaggcta ttcggctatg actgggcaca acagacaatc ggctgctctg atgccgcgt 3240
gttccggctg tcagcgcagg ggcccccggg tcttttgc aagaccgacc tgtccggtgc 3300
cctgaatgaa ctgcaggacg aggcagcgcg gctatcgtgg ctggccacga cgggcgttcc 3360
ttgcgcagct gtgctcgacg ttgtcactga agcgggaagg gactggctgc tattggcgca 3420
agtgcggggg caggatctcc tgtcatctca ccttgcctct gccgagaaag tatccatcat 3480
ggctgatgca atgcggcggc tgcatacgt tgatccggct acctgcccat tcgaccacca 3540
agcgaaacat cgcacgcagc gagcacgtac tcggatggaa gccggtcttg tcgatcagga 3600
tgatctggac gaagagcatc aggggctcgc gccagccgaa ctgttcgcca ggctcaaggc 3660
gcgcagtcgc gacggcgatg atctcgtcgt gacctatggc gatgcctgct tgccgaatat 3720
catggtggaa aatggccgct tttctggatt catcgactgt ggccggctgg gtgtggcgga 3780
ccgctatcag gacatagcgt tggctaccgg tgatattgct gaagagcttg gcggcgaatg 3840
ggctgaccgc ttcctcgtgc tttacgggat cgcgctccc gattcgcagc gcatcgctt 3900
ctatcgctt cttgacgagt tcttctgagg ggatcgatcc gtctgtaag tctgcagaaa 3960
ttgatgatct attaaacaat aaagatgtcc actaaaatgg aagtttttcc tgtcatactt 4020
tgttaagaag ggtgagaaca gactacctac attttgaatg gaaggattgg agctacgggg 4080
gtgggggtgg ggtgggatta gataaatgcc tgctctttac tgaaggctct ttactattgc 4140
tttatgataa tgtttcatag ttggatatca taatttaaac aagcaaaacc aaattaaggg 4200
ccagctcatt cctcccactc atgatctata gatctataga tctctcgtgg gatcattgtt 4260
tttctcttga tccccacttt gtggttctaa gtactgtggt ttccaaatgt gtcagtttca 4320
tagcctgaag aacgagatca gcagcctctg ttccacatac acttcattct cagtattgtt 4380
ttgccaagtt ctaattccat cagaagctga ctctagatct ggatccggcc agctaggccg 4440
tcgacctcga gtgatcagg accaaggctc tcgctctgtg tccgttgagc tcgacgacac 4500
aggacacgca aattaattaa ggccggcccg tacctctag tcaaggcctt aagtgagtcg 4560
tattacggac tggccgctgt tttacaacgt cgtgactggg aaaaccctgg cgttacccaa 4620
cttaatcgcc ttgcagcaca tcccccttcc gccagctggc gtaatagcga agaggccgc 4680
accgatcgcc cttcccaaca gttgcgcagc ctgaatggcg aatggcgctt cgcttggtaa 4740
taaagccgc ttcggcgggc tttttttt 4768

```

<210> 2

<211> 6355

<212> DNA

<213> Plasmid vector

<400> 2

gtttaatagt aatcaattac ggggtcatta gttcatagcc catatatgga gttccgcgtt

60

acataaactta	cggtaaatgg	cccgccctggc	tgaccgcccc	acgacccccg	cccattgacg	120
tcaataatga	cgtatgttcc	catagtaacg	ccaatagggg	ctttccattg	acgtcaatgg	180
gtggagtatt	tacggtaaac	tgcccacttg	gcagtacatc	aagtgtatca	tatgccaaat	240
acgcccccta	ttgacgtcaa	tgacggtaaa	tggcccgcct	ggcattatgc	ccagtacatg	300
accttatggg	actttcctac	ttggcagtag	atctacgtat	tagtcatcgc	tattaccatg	360
gtgatgcggg	tttggcagta	catcaatggg	cgtggatagc	ggtttgactc	acggggattt	420
ccaagtctcc	accccatgga	cgtcaatggg	agtttgtttt	ggcaccaaaa	tcaacgggac	480
tttccaaaat	gtcgtaaaca	ctccgcccc	ttgacgcaaa	tggcggttag	gcgtgtacgg	540
tgggaggtct	atataagcag	agctggttta	gtgaaccgtc	agatccgcta	gcgtaccggg	600
togccaccat	ggtgagcaag	ggcgaggagc	tggtcaccgg	ggtggtgccc	atcctggtcg	660
agctggacgg	cgacgtaaac	ggccacaagt	tcagcgtgtc	cggcgagggg	gagggcgatg	720
ccacctacgg	caagctgacc	ctgaagtcca	tctgcaccac	cggcaagctg	cccgtgccct	780
ggcccaccct	cgtgaccacc	ctgaacctac	gcgtgcagtg	cttcagccgc	taccccgacc	840
acatgaagca	gcacgacttc	ttcaagtccg	ccatgcccga	aggctacgtc	caggagcgca	900
ccatcttctt	caaggacgac	ggcaactaca	agaccgcgcg	cgaggtgaag	ttcgagggcg	960
acaccctggg	gaaccgcacg	gagctgaagg	gcacgcagctt	caaggaggac	ggcaacatcc	1020
tggggcacaa	gctggagtag	aactacaaca	gccacaacgt	ctatatcatg	gccgacaagc	1080
agaagaacgg	catcaaggtg	aacttcaaga	tccgccacaa	catcgaggac	ggcagcgtgc	1140
agctcgccga	ccactaccag	cagaaccacc	ccatcgccga	cggccccgtg	ctgctgcccg	1200
acaaccacta	cctgagcacc	cagtccgccc	tgagcaaaga	ccccaacgag	aagcgcgacg	1260
acatggtcct	gctggagttc	gtgaccgccc	ccgggatcac	tctcggcacg	gacgagctgt	1320
acaagtcggg	actcagatcc	accggatcta	gataactgat	cataatcagc	cataccacat	1380
ttgtagaggt	tttacttgct	ttaaaaaac	tcccacacct	ccccctgaac	ctgaaacata	1440
aaatgaatgc	aattgttgtt	gttaacttgt	ttattgcagc	ttataatggg	tacaaataaa	1500
gcaatagcat	cacaaatttc	acaaataaag	catttttttc	actgcattct	agttgtgtgt	1560
tgtccaaact	catcaatgta	tcttaacgcg	aactacgtca	ggtggcactt	ttcggggaaa	1620
tgtgcgcgga	acccctatct	gtttatcttt	ctaaatacat	tcaaataatg	atccgctcat	1680
gagacaataa	ccctgataaa	tgcttcaata	atattgaaaa	aggaagagta	tgagtattca	1740
acatttccgt	gtcgccttta	ttcccttttt	tgccgcattt	tgcccttctg	tttttgcctc	1800
cccagaaaac	ctgggtgaaag	taaaagatgc	tgagatcag	ttgggtgcac	gagtgggtta	1860
catcgaactg	gatctcaaca	gcggtgaagt	ccttgagagt	tttcgccccg	aagaacgttc	1920
tccaatgatg	agcactttta	aagttctgct	atgtggcgcg	gtattatccc	gtgttgacgc	1980
cgggcaagag	caactcgggc	gccgcataca	ctattctcag	aatgacttgg	ttgagtactc	2040
accagtcaca	gaaaagcatc	ttacggatgg	catgacagta	agagaattat	gcagtgtctg	2100
cataaccatg	agtataaaca	ctgcggccaa	cttacttctg	acaacgatcg	gaggaccgaa	2160
ggagctaacc	gctttttttg	acaacatggg	ggatcatgta	actcgccctg	atcgttggga	2220
accggagctg	aatgaagcca	taccaaaccg	cgagcgtgac	accacgatgc	ctgtagcaat	2280
ggcaacaacg	ttgcgcaaac	tattaactgg	cgaactactt	actctagctt	cccggcaaca	2340
attaatagac	tggatggagg	cgataaaagt	tgcaaggacca	cttctgcgct	cggcccttcc	2400
ggctggctgg	tttattgctg	ataaatctgg	agccggtgag	cgtgggtctc	gcggtatcat	2460
tgcagcactg	gggcccagat	gtaagccctc	ccgtatcgta	gttatctaca	cgacggggag	2520
tcaggcaact	atggatgaac	gaaatagaca	gatcgctgag	ataggtgcct	cactgattaa	2580
gcatttgtaa	ctgtcagacc	aagtttactc	atatatactt	tagattgatt	taccccggtt	2640
gataatcaga	aaagccccaa	aaacaggaag	attgtataag	caaataattta	aattgtaaac	2700
gttaatatct	tggttaaaat	cgctgttaaa	ttttgttaaa	tcagctcatt	ttttaaccaa	2760
taggcccga	tcggcaaaa	cccttataaa	tcaaaagaat	agcccagatg	aggggtgagt	2820
gttggtccag	tttggaacaa	gagtcacta	ttaaagaacg	tggactccaa	cgtcaaaggg	2880
cgaaaaaccg	tctatcaggg	cgatggccca	ctacgtgaac	catcacccaa	atcaagtgtt	2940
ttggggctga	ggtgccgtaa	agcactaaat	cggaaacctc	aaggggagccc	ccgatttaga	3000
gcttgacggg	gaaagcgaa	gtggcgagaa	aggaagggaa	gaaagcgaaa	ggagcggggc	3060
ctaggcgctg	ggcaagtgtg	gcggtcacgc	tgcgcgtaac	caccacaccc	gccgcgctta	3120
atgcgcgcgt	acagggcgcg	taaaaggatc	taggtgaaga	tcctttttga	taactctcat	3180
acaaaaatcc	cttaacgtga	gttttcgctc	cactgagcgt	cagaccccg	agaaaagatc	3240
aaaggtatct	cttgagatcc	tttttttttg	cggttaattc	gttgcttgca	aacaaaaaaa	3300
ccaccgctac	cagcgggtgg	ttgtttgccc	gatcaagagc	taccaactct	ttttccgaag	3360
gtaactggct	tcagcagagc	gcagatacca	aatactgttc	ttctagtgtg	gccgtagtta	3420
ggccaccact	tcaagaactc	tgtagcaccg	cctacatacc	tcgctctgct	aatcctgtta	3480

ccagtggctg	ctgccagtgg	cgataaagtcg	tgtcttaccg	ggttggactc	aagacgatag	3540
ttaccggata	agggcgagcg	gtcgggctga	acggggggtt	cgtgcacaca	gcccagcttg	3600
gagcgaacga	cctacaccga	actgagatac	ctacagcgtg	agctatgaga	aagcgccacg	3660
cttcccgaag	ggagaaaaggc	ggacaggtat	ccggtaagcg	gcaggggtcgg	aacaggagag	3720
cgcacgaggg	agcttccagg	gggaaacgcc	tggtatcttt	atagtcctgt	cgggtttcgc	3780
cacctctgac	ttgagcgtcg	atttttgtga	tgctcgtcag	gggggcggag	cctatggaaa	3840
aacgccagca	acgcggcctt	tttacggttc	ctggcctttt	gctggccttt	tgctcacatg	3900
taatgtgagt	tagctcactc	attaggcacc	ccaggcttta	cactttatgc	ttccggctcg	3960
tatgttgtgt	ggaattgtga	gcggataaca	atttcacaca	ggaaacagct	atgaccatga	4020
ttacgccaag	ctacgtaata	cgactcacta	ggcgcccgcg	tttaacaat	gtgctcctct	4080
ttggcttgct	tccgcggggc	aagccagaca	agaaccagtt	gacgtcaagc	ttcccgggac	4140
gcgtgctagc	ggcgcgccga	attcctgcag	gattcgaggg	cccctgcagg	tcaattctac	4200
cgggtagggg	aggcgctttt	cccaaggcag	tctggagcat	gcgcttttagc	agccccgctg	4260
gcacttggcg	ctacacaagt	ggcctctggc	ctcgcacaca	ttccacatcc	accggtagcg	4320
ccaaccggct	cgttcttttg	gtggcccctt	cgcgccacct	tctactcctc	ccctagttag	4380
gaagtcccc	cccgcgccgc	agctcgcgtc	gtgcaggacg	tgacaaatgg	aagtagcacg	4440
tctcactagt	ctcgtgcaga	tggacagcac	cgctgagcaa	tggaaagcggg	taggcctttg	4500
gggcagcggc	caatagcagc	tttgcctctt	cgctttctgg	gctcagaggc	tggaagggg	4560
tggttccggg	ggcgggctca	ggggcgggct	caggggcggg	gcgggcgcga	aggtcctccc	4620
gaggccccgc	attctgcac	gcttcaaaag	cgacgtctg	ccgcgctgtt	ctcctcttcc	4680
tcatctccgg	gcctttcgac	ctgcagccaa	tatgggatcg	gccattgaac	aagatggatt	4740
gcacgcaggt	tctccggccg	cttgggtgga	gaggctatcc	ggctatgact	gggcacaaca	4800
gacaatcggc	tgctctgatg	ccgcctgtgt	ccggctgtca	gcgcaggggc	gcccggttct	4860
ttttgtcaag	accgacctgt	ccggtgcctt	gaatgaactg	caggacgagg	cagcgccggc	4920
atcgtggctg	gccacgacgg	gcgttccttg	cgacgtgtg	ctcgacgttg	tactgaagc	4980
gggaagggag	tggtgctat	tgggcgaagt	gccggggcag	gatctcctgt	catctcacct	5040
tgctcctgcc	gagaaaagtat	ccatcatggc	tgatgcaatg	cggcggtctg	atacgcttga	5100
tccggctacc	tgccattctg	accaccaagc	gaaacatcgc	atcgagcgag	cacgtactcg	5160
gatggaagcc	ggtcttgtcg	atcaggatga	tctggacgaa	gagcatcagg	ggctcgcgcc	5220
agccgaactg	ttcgccaggc	tcaaggcgcg	catgcccgac	ggcgatgate	tcgtcgtgac	5280
ccatggcgat	gcctgcttgc	cgaatatcat	ggtggaaaat	ggccgctttt	ctggattcat	5340
cgactgtggc	cggttgggtg	tggcgggaccg	ctatcaggac	atagcgttgg	ctacccttga	5400
tattgtctgaa	gagcttggcg	gcgaatgggc	tgaccgcttc	ctcgtgcttt	acggtatcgc	5460
cgctcccgat	tcgcagcgca	tgccttctta	tgccttctt	gacgagttct	tctgagggga	5520
tcgatccgtc	ctgtaagtct	gcagaaattg	atgatctatt	aaacaataaa	gatgtccact	5580
aaaatggaag	ttttcctgt	catactttgt	taagaagggt	gagaacagag	tacctacatt	5640
ttgaatggaa	ggattggagc	tacgggggtg	gggggtgggt	gggattagat	aaatgcctgc	5700
tctttactga	aggctcttta	ctattgcttt	atgataatgt	ttcatagttg	gatatacata	5760
tttaaaacaag	caaaaacaaa	ttaagggccca	gctcattcct	cccactcatg	atctatagat	5820
ctatagatct	ctcgtgggat	cattgttttt	ctcttgattc	ccactttgtg	gttctaagta	5880
ctgtggtttc	caaatgtgtc	agtttcatag	cctgaagaac	gagatcagca	gcctctgttc	5940
cacatacact	tattctcag	tattgttttg	ccaagtctta	attccatcag	aagctgactc	6000
tagatctgga	tccggccagc	taggcctgctg	acctcgagt	atcagggtacc	aaggtcctcg	6060
ctctgtgtcc	gttgagctcg	acgacacagg	acacgcaaat	taattaaggc	cggcccgtac	6120
cctctagtca	aggccttaag	tgagtcgtat	tacggactgg	ccgtcgtttt	acaacgtcgt	6180
gactgggaaa	accctggcgt	taccacaact	aatcgcttgg	cagcacatcc	ccctttcgcc	6240
agctggcgta	atagcgaaga	ggcccgcacc	gatcgccctt	cccaacagtt	gcgcagcctg	6300
aatggcgaat	ggcgcttcgc	ttggtataaa	agcccgcctc	ggcgggcttt	ttttt	6355

<210> 3
 <211> 28
 <212> DNA
 <213> Plasmid vector

<400> 3
 aatgtgctcc tctttggctt gcttccgc

20080527 022002

<210> 4
<211> 26
<212> DNA
<213> Plasmid vector

<400> 4
ggaagcaagc caaagaggag cacatt 26

<210> 5
<211> 27
<212> DNA
<213> Plasmid vector

<400> 5
aactggttct tgtctggctt ggcccgc 27

<210> 6
<211> 25
<212> DNA
<213> Plasmid vector

<400> 6
gggccaagcc agacaagaac cagtt 25

<210> 7
<211> 28
<212> DNA
<213> Plasmid vector

<400> 7
aaggtcctcg ctctgtgtcc gttgagct 28

<210> 8
<211> 24
<212> DNA
<213> Plasmid vector

<400> 8
caacggacac agagcgagga cctt 24

<210> 9
<211> 27
<212> DNA
<213> Plasmid vector

<400> 9
aatttgctg tcctgtgtcg tcgagct 27

<210> 10
<211> 23
<212> DNA
<213> Plasmid vector

~~<400> 10~~
cgacgacaca ggacacgcaa att 23

<210> 11

10087523.022602

```

<211> 26
<212> DNA
<213> Plasmid vector

<400> 11
tgtgctcctc ttggcttgc ttccaa                26

<210> 12
<211> 26
<212> DNA
<213> Plasmid vector

<400> 12
ttggaagcaa gccaaagagg agcaca                26

<210> 13
<211> 25
<212> DNA
<213> Plasmid vector

<400> 13
ctggttcttg tctggettgg cccaa                25

<210> 14
<211> 25
<212> DNA
<213> Plasmid vector

<400> 14
ttgggccaag ccagacaaga accag                25

<210> 15
<211> 24
<212> DNA
<213> Plasmid vector

<400> 15
ggtcctcgct ctgtgtccgt tgaa                24

<210> 16
<211> 24
<212> DNA
<213> Plasmid vector

<400> 16
ttcaacggac acagagcgag gacc                24

<210> 17
<211> 23
<212> DNA
<213> Plasmid vector

<400> 17
ttggcttgc ctgtgtcgtc gaa                23

<210> 18
<211> 23

```

200220-0254800F

```

<212> DNA
<213> Plasmid vector

<400> 18
ttcgacgaca caggacacgc aaa                                23

<210> 19
<211> 25
<212> DNA
<213> Plasmid vector

<400> 19
atgaccgctc aggaaacctg ttgca                                25

<210> 20
<211> 25
<212> DNA
<213> Plasmid vector

<400> 20
ataggcatag taggccagct tgagg                                25

<210> 21
<211> 51
<212> DNA
<213> Plasmid vector

<400> 21
tgtgtctctc tttggcttgc ttccaattaa ccctcactaa agggaacgaa t    51

<210> 22
<211> 50
<212> DNA
<213> Plasmid vector

<400> 22
ctggttcttg tctggcttgg cccaatgcaa caggtttcct gagcggtcat    50

<210> 23
<211> 49
<212> DNA
<213> Plasmid vector

<400> 23
ggtcctcgct ctgtgtcgtg tgaacctcaa gctggcctac tatgcctat    49

<210> 24
<211> 49
<212> DNA
<213> Plasmid vector

<400> 24
tttgctgtgc ctgtgtcgtc gaacgactaa tacgactcac tatagggcg    49

```

```

<210> 25
<211> 25
<212> DNA

```

20050523 022502

```

<213> Plasmid vector

<400> 25
gccaatggac tcttagtttt ggaac                25

<210> 26
<211> 25
<212> DNA
<213> Plasmid vector

<400> 26
gttctggcaa acaaattcgg cgcac                25

<210> 27
<211> 51
<212> DNA
<213> Plasmid vector

<400> 27
tgtgtcctc tttggcttgc ttccaattaa ccctcactaa agggaacgaa t        51

<210> 28
<211> 50
<212> DNA
<213> Plasmid vector

<400> 28
ctggttcttg tctggcttgg cccaagttcc aaaactaaga gtccattggc        50

<210> 29
<211> 49
<212> DNA
<213> Plasmid vector

<400> 29
ggtcctcgct ctgtgtccgt tgaagtgcgc cgaatttggt tgccagaac        49

<210> 30
<211> 25
<212> DNA
<213> Plasmid vector

<400> 30
gaaccttggt gtgccaagtt acttc                25

<210> 31
<211> 25
<212> DNA
<213> Plasmid vector

<400> 31
gaactttggc tgaaccctt gttct                25

```

```

<210> 32
<211> 52
<212> DNA
<213> Plasmid vector

```


1007523.02502
200320.2252001

<400> 32	
ttgtctctc tttggcttgc gttgaacgac taatacgact cactataggg cg	52
<210> 33	
<211> 50	
<212> DNA	
<213> Plasmid vector	
<400> 33	
ctgggttcttg tctggcttgg cccaagaagt aacttggcac accaagggtc	50
<210> 34	
<211> 48	
<212> DNA	
<213> Plasmid vector	
<400> 34	
ggtcctcgct ctgtgtcgt tgaagaacaa ggggttcagc caaagttc	48
<210> 35	
<211> 48	
<212> DNA	
<213> Plasmid vector	
<400> 35	
tttgcggtgc ctgtgtcgtc gaattaaccc tactaaagg gaacgaat	48
<210> 36	
<211> 25	
<212> DNA	
<213> Plasmid vector	
<400> 36	
atgccggatc tcctactact gggcc	25
<210> 37	
<211> 25	
<212> DNA	
<213> Plasmid vector	
<400> 37	
tgcatagta gacagcgatg gaacg	25
<210> 38	
<211> 53	
<212> DNA	
<213> Plasmid vector	
<400> 38	
gacaagaacc agttgacgtc aagcttcccg ggacgcgtgc tagcggcgcg ccg	53
<210> 39	
<211> 50	
<212> DNA	
<213> Plasmid vector	

10067523.022802

<400> 39
ctggttcttg tctggcttgg cccaaggccc agtagtagga gatccggcat 50

<210> 40
<211> 49
<212> DNA
<213> Plasmid vector

<400> 40
ggtcctcgct ctgtgtccgt tgaacgttcc atcgctgtct actatgaca 49

<210> 41
<211> 50
<212> DNA
<213> Plasmid vector

<400> 41
ctggttcttg tctggcttgg ccaaaaaagc cgacagccac gtcacaagc 50

<210> 42
<211> 49
<212> DNA
<213> Plasmid vector

<400> 42
ggtcctcgct ctgtgtccgt tgaagcccaa tgccacagag acagaatgt 49

<210> 43
<211> 51
<212> DNA
<213> Plasmid vector

<400> 43
ctggttcttg tctggcttgg cccaagtgg atcctctcca aggcccac t 51

<210> 44
<211> 50
<212> DNA
<213> Plasmid vector

<400> 44
ggtcctcgct ctgtgtccgt tgaactccag tgccgagtgt gtggggacag 50